

Pediatric Otolaryngology's Most Recent Advances

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Abstract

Patients with ear, nose, and throat issues frequently attend primary care doctors' offices, urgent care centres, emergency departments, and children's hospitals. The field of paediatric otolaryngology has grown greatly since its inception in the 1970s and much more so in the past five to ten years. The purpose of this special issue is to provide our paediatrician colleagues with the knowledge they need to assist in the care of children with ear, nose, and throat diseases. Recent developments in both diagnostic and therapeutic procedures are covered.

Interactions between a young patient, parent or guardian, and the healthcare professional are all part of paediatric otolaryngology. Clinicians are embracing direct measuring tools like patient-reported outcome measures (PROM) as a mode of communication between the patient and healthcare practitioner as healthcare moves toward patient-centered treatment. Thus, it is important to take into account the literacy levels of both the patient and their parent or legal guardian. Additionally, it was discovered that PROMs given in Spanish in paediatric audiology and otolaryngology were beyond the suggested reading level. It is essential to evaluate how readable Spanish-translated PROMs are in order to deliver safe, precise, and high-quality care. This study's objective is to evaluate the readability of PROMs in paediatric otolaryngology and determine how well they adhere to readability guidelines.

Recent developments in robotics technology have made it possible to undertake more complicated surgical procedures with reduced invasiveness. The use of robotic aid in otolaryngology and head and neck surgery was discussed in this article. We emphasise the benefits of robotic surgery and its clinical use in this area.

Keywords: Pediatric otolaryngology; Therapeutic; Immune system; ENT disorders; Drug development; Diagnosis; Surgical planning

Introduction

Patients with chronic illnesses with childhood onset are particularly vulnerable throughout the transition from paediatric to adult centred healthcare systems. In the US, children with various chronic diseases account for 25% of acute-care hospitalizations and 50% of the cost of paediatric hospital care. With 85% of children with chronic illnesses living into adulthood today, there is an increase in the need for transitional care between paediatric and adult healthcare systems, Adolescent Health and Medicine [1]. Starting as early as age 12, this planning process can last until age 25 or until the transition to adult healthcare systems. Doctors have studied the effects of inadequate transition and the particular requirements of young adult patients across a number of medical specialities. Rheumatologic conditions, sickle cell anaemia, cystic fibrosis, and inflammatory bowel disease have been the subjects of the majority of studies in this field. However, surgical subspecialties like otolaryngology have not yet explicitly stated their position on transition and their role within it [2].

To convert transition literature into clinically useful interventions, "Got Transition," a transition-focused company, has created quality improvement tools including the "Six Core Elements of Health Care Transition." These fundamental components include transition guidelines and policies, evaluations of patients' knowledge and self-care abilities, production of medical summaries, transfer of care, and completion of the transition. It has been demonstrated that focusing on transition awareness improves patient outcomes. Rheumatologic patients were less likely to be hospitalised and had shorter follow-up periods when they were directly sent to an adult clinician by their paediatric care, according to a 2020 study [3].

Despite these advancements, a smooth transition is difficult for both patients and clinicians. A "social-ecological model of adolescent and young adult preparation for transition" (SMART) was published by Schwartz et al. in 2011 to assess the greater life context of a patient's

transition to adult care. This model includes two categories of barriers: "pre-existing factors," which are less amenable to intervention, such as neurocognitive/IQ, access/insurance, and socio demographics, and "modifiable variables," which are amendable to intervention such as knowledge, self-efficacy, and beliefs/expectations. The functions of providers are recognised in this model [4].

Clinicians are encouraged to focus on "modifiable variables" to increase patient preparedness by incorporating patients, parents, and other stakeholders into an overall assessment of transition preparation. Pediatric patients with a variety of chronic medical disorders, such as laryngeal stenosis, recurrent respiratory papillomatosis, and speech delay, are treated by otolaryngologists. The opinions and clinical tendencies of otolaryngologists about patient transfer to adult treatment are yet unknown, nevertheless [5].

The objective of this study is to evaluate clinical practises and understanding of transitional care in otolaryngology, including the timing of the transition, patient self-management options, use of multidisciplinary resources, and awareness of hurdles. Since the otolaryngology community has not published any standardised protocols or recommendations on this subject, we expected that there would be wide variations in clinical preferences and patterns during

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this stage of patient care [6].

There have been numerous airway operations, head and neck surgeries, and surgeries involving a significant amount of surgical dissection. Major tissue damage, functional disability, and a lower quality of life may ensue from this. However, with minimally invasive techniques, the surgeon has several endoscopic entry sites because to enhanced video imaging, endoscopic technology, and instrumentation [7]. Despite the fact that endoscopic technology has advanced, there are still a number of difficulties with the method. Examples include (1) the instrumentation's limited range and degree of motion, (2) the operative field's limitation to "line of sight," (3) the absence of three-dimensional imaging of the operative field, (4) the amplification of physiological tremors, (5) the dexterity's compromise, and (6) the incoherent hand-eye coordination. With these difficulties in mind, the development of surgical robotics was motivated by the need to enhance the advantages of MIS while overcoming the constraints of existing endoscopic technologies [8].

Material and Methods

An institutional review board (IRB) review approved this work as non-clinical human research and it is a bibliometric review. Powell's systematic study on paediatric otolaryngology PROMs and Readability analysis of paediatric otolaryngology patient reported outcome measures in English led to the identification of paediatric otolaryngology PROMs. PROMs in English that were made available to the public along with either publicly available inside publication Spanish translations met the inclusion criteria [9].

Powell's systematic review of paediatric otolaryngology PROMs led to the discovery of paediatric otolaryngology PROMs. From a literature search conducted using the PubMed (pubmed.ncbi.nlm.nih.gov) and Google Scholar databases, Spanish paediatric otolaryngology PROMs were chosen (scholar.google.com). Seven PROMs were found when the literature search was finished. Only four Spanish validations of PROMs included the PROM's translation in their release. Email messages were sent to the remaining PROMs' writers. In the end, this study comprised eight paediatric otolaryngology PROMs. A Latin Spanish translator evaluated the PROMs for clarity of grammar, syntax, and understanding [10].

The authors of the study created a questionnaire with 31 items to gauge how the COVID-19 epidemic has affected paediatric otolaryngology practise globally, investigate referral patterns, and identify possible causes (Appendix A). The survey was divided into four sections: practise demographics, COVID-19 community constraints, general practise changes, and condition-specific practise adjustments. Information about the location and kind of practise was gathered in the practise demographics section. The community's COVID-19 constraints were rated at their average strictness, leniency, and timing of survey deployment [11].

No restrictions, closure of schools, gyms, non-essential businesses, restaurant closures, bans on social gatherings, "stay at home" orders, suspension of in-person clinical visits, restriction of in-person visits to just "urgent/emergent," cancellation of non-urgent operating rooms (ORs), or other restrictions on OR clinics were the categories of restrictions (specify) [12]. The volume of virtual clinics, hospital mandated OR and clinic adjustments, OR and clinic time, and PPE access were all surveyed to evaluate general practise changes. Referral volumes were compared to pre-pandemic levels for 54 frequent paediatric otolaryngology problems, with the results showing a percent

rise, decrease, or no change. The categories for conditions were neck, airway, ear, nose, oral cavity/oropharynx, and so on [13].

Discussion

In paediatric medicine, PROMs are made for parents or other legal guardians of the kid to complete. Then, academic providers utilise PROMs to comprehend childhood chronic disorders. According to studies, using PROMs enhances patient outcomes while using fewer healthcare resources. This may then have an impact on the growing use of PROMs in paediatrics. For doctors to accurately use the PROMs, patients and their caregivers must be able to read and grasp them [14].

This study looked at how the paediatric otolaryngology telemedicine service was perceived by patients, as well as how doctors felt about the platform now in use. Regarding the benefits that patients perceived, we discovered that they were generally in favour of the telemedicine service. The patient's perception that telemedicine provided easier access to healthcare, however, was a significant exception; this response was distributed more equally [15].

Conclusions

The reading level of paediatric PROMs in Spanish is currently higher than what is advised for patients and their families. To encourage equitable healthcare among vulnerable and minority communities, future PROMs should be created at the required average reading level. Future translations may also be enhanced by adding linguistics specialists in addition to clinician experts in paediatric otolaryngology, as well as by expanding the number of reviewers.

In West Virginia, parents of paediatric otolaryngology patients exhibit low expectations of the healthcare system and worry about practicalities that can pose obstacles. Although no statistically significant relationships were found, both surveys provided useful descriptive information. This study contributes to the body of knowledge by outlining probable contributing variables to care barriers in West Virginia as perceived by those who provide treatment for paediatric otolaryngology patients. Addressing the potential is crucial.

Conflict of Interest

None

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